

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 22, 2009 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 3-16, 18, 26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al (6,837,886).

Collins et al disclose an ablation catheter comprising a fixed braided electrode (28) for forming an ablation lesion. As shown in Figure 20E, the ablation electrode is encapsulated (i.e. between inner and outer walls) in a shroud (137). A plurality of openings (139) are provided to allow the exposed portions of the braided electrode to come into contact with tissue (col. 14, lines 25-33). Collins et al also disclose providing a fluid through the braided electrode member (col. 13, lines 65-67) by directing the irrigant with the shroud member. Collins et al disclose the use of a conductive irrigant, and the Collins et al device is deemed to operate to treat tissue in the same manner (e.g. ohmic heating, convection, conduction, etc.) as recited in applicant's claims. The

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only feature not expressly shown by Collins et al is the provision of an inner wall in the embodiment of Figure 20E.

However, Collins et al do clearly teach that it is known to provide the shroud-embodiments of Figures 20A-20E with inner and outer tubular structures between which the braided member is located. With reference to Figure 20B, Collins et al specifically teach that it is advantageous to provide an internal shroud (134) with the braided electrode being provided between the inner and outer shrouds (col. 14, lines 7-12). Hence, Collins et al clearly teach it is known to provide a “sandwiched” braided electrode assembly. The examiner maintains that the use of such an internal shroud in the embodiment of Figure 20E would be an obvious design consideration for the skilled artisan.

Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al ('886) in further view of the teaching of Bednarek et al (6,120,500).

Collins et al fail to disclose a second lumen for carrying a control wire for shaping the catheter body as recited in these claims.

As addressed in the previous Office action, Bednarek et al discloses another ablation catheter that provides a second lumen (23 - Figure 11) including a control wire (16) for providing a pre-curved shape to the catheter body (Figure 2).

To have provided the Collins et al catheter device with a second lumen for housing a control wire to control the shape of the catheter would have been an obvious modification for one of ordinary skill in the art in view of the teaching of Bednarek et al.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al ('886) in view of the teaching of Bednarek (6,120,500) as applied to claim 23 above, and further in view of the teaching of Swartz et al (6,080,151).

The combination of the Bednarek et al teaching with the Collins et al device has been addressed. While each of these catheters provide a wire connected to the electrode means, there is no express disclosure that the wire is carried through the second lumen (i.e. isolated from the fluid lumen).

The examiner maintains that the passage of wires through various lumens is generally known in the art, and that to have provided the Collins et al wire through either lumen (after considering the modification suggested by Bednarek et al) would have been an obvious design consideration. However, Swartz et al is cited as showing that it is generally known to provide electrode leads through a second lumen to keep the wires separate from the fluid delivery lumen. See, for example, Figure 3.

To have provided the Collins et al device, as modified by the teaching of Bednarek et al, with the lead extending through the second lumen to isolate the wire from the fluid lumen would have been an obvious design modification for one of ordinary skill in the art in view of the teaching of Swartz et al.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al ('886) in view of the teaching of Levin et al ('830).

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The Collins et al device has been addressed previously. Collins et al clearly disclose a braided electrode member embedded in the wall of a catheter (i.e. shroud), but fails to disclose the electrode defines a surface that is raised above the outer surface of the catheter shaft.

As addressed in previous Office actions, Levin et al disclose a catheter having an electrode embedded in the wall of a catheter. In particular, Levin et al teach that it is known to provide the electrode with a surface that is raised above the outer surface of the catheter shaft to facilitate placement against tissue.

To have formed either the Collins et al catheter device with an electrode that projects slightly from the outer wall of the catheter to facilitate contact with tissue would have been an obvious modification for one of ordinary skill in the art in view of the teaching of Levin et al.

Response to Arguments

Applicant's arguments filed November 23, 2009 have been fully considered but they are not persuasive.

The anticipatory reference have all been withdrawn, as have the rejections involving the Brucker et al reference as the base reference. Upon further consideration of the claims and the Collins et al reference, the new basis for rejection have been set out above.

Applicant asserts on page 10 of the response that Collins teaches a braided conductive member that is covered by a shroud that is only on one side of the

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conductive member and indicates this teaching at column 14 lines 26 and 27 of the Collins reference. However, as indicated above, Collins does expressly teach that it may be advantageous to also provide an internal shroud such that the braided member is "sandwiched" between the shrouds. Column 14, lines 1-12, and particularly lines 7-12, disclose this arrangement. In view of this disclosure, the examiner maintains that the Collins reference provides a clear teaching of this feature. While Collins do not expressly state that the internal shroud is used with the embodiment of Figure 20E, the examiner maintains that it would be obvious to use the internal shroud in that embodiment, particularly given Collins' disclosure that the shroud embodiments are essentially obvious variants.

Applicant's arguments with respect to the dependent claims rests solely on the premise that Collins et al fails to disclose inner and outer tubular members that "sandwich" the braided electrode. As addressed above, the Collins et al reference clearly shows such a relationship, and the rejection of the dependent claims are all deemed to remain tenable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Peffley whose telephone number is (571) 272-4770. The examiner can normally be reached on Mon-Fri from 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Peffley/
Primary Examiner, Art Unit 3739

/mp/
January 6, 2010